

AMENDMENTS TO THE CLAIMS

Claims 1-7 (Canceled)

8. (Currently amended) Hydraulic piston, in particular brake piston for an automotive vehicle brake, with a thermochemically treated surface, with several superposed layers at the piston surface, comprising:

fabricating a hydraulic piston,

arranging at the hydraulic piston's surface a layer of oxide that ~~is arranged directly at the piston surface and~~ has a thickness of at least $1\mu\text{m}$,

arranging a connecting layer ~~which is arranged beneath the layer of oxide that and~~ is mainly composed of nitrides,

arranging a diffusion layer ~~that is arranged beneath the connecting layer that and~~ includes nitrogen in a dissolved condition or separated nitrides, wherein the connecting layer has a minimum thickness of $8\mu\text{m}$.

9. (Previously presented) Hydraulic piston as claimed in claim 8, wherein the connecting layer includes capillary tubes which are respectively closed at the piston surface by portions of the layer of oxide.

10. (Currently amended) Process for surface treatment of a hydraulic piston, ~~in particular a brake piston,~~ comprising the step of: following procedure:

a nitrocarburization of the piston in a gaseous medium;

a postoxidation of the piston in a medium yielding oxygen O_2 ;

a machining of the oxidized surface for adjusting the surface quality, wherein the temperature during the nitrocarburization process amounts to maximally 530°C .

11. (Currently amended) Process for surface treatment of a hydraulic piston as claimed in claim 10, wherein the nitrocarburization of the piston is carried out in several stages:

a first stage wherein the piston is exposed to a first gaseous medium including
~~comprised of~~ ammonia NH_3 , carbon dioxide CO_2 , and nitrogen,

a second stage of nitrocarburization wherein the piston is exposed to a second gaseous
medium including ~~comprised of~~ ammonia NH_3 and carbon dioxide CO_2 .

12. (Canceled)

13. (Previously presented) Process for surface treatment of a hydraulic piston as claimed
in claim 10, wherein an ambient medium separated from ammonia NH_3 is provided for the
piston before the postoxidation.

14. (Previously presented) Process for surface treatment of a hydraulic piston as claimed
in claim 10, wherein said machining is effected by a polishing or brushing operation.